- *May hold easements which are perpetual in duration in accordance with the Virginia Conservation Easement Act (has had a principal office in the Commonwealth of Virginia for at least five years,*
- *Is a charitable corporation exempt from taxation pursuant to 26USCA 501 (c)(3), and a "qualified organization" and an "eligible donee" under Section 170(h)(3) of the internal Revenue Code and Treasury Regulation §1.170A-14(c)(1), whose purposes include those specified in the Virginia Conservation Easement Act, and has had a principal office in the Commonwealth of Virginia for at least five years,*

Any proposed changes in credit composition must be proposed in the MBI. A copy of the recorded document shall be provided to the Corps within thirty (30) days of recordation.

B. Post-Construction

During or after the fifth growing season, the Chair(s), acting in consultation with the IRT, may assess the Functions and values of this ecological system (or when requested to do so by the Bank Sponsor). The IRT may issue a written determination to the Bank Sponsor that due to the demonstration of successful performance, the number of Credits attributable to this Mitigation Bank may be modified to reflect the Functions and values provided.

III. Accounting Procedures

A. The Bank Sponsor shall comply with the accounting procedures described in Section VI.D of the Banking Instrument and the quantitative assessment of Credits and Debits for permitted impacts as described herein.

B. In no event shall the cumulative total area of impacts to wetlands permitted to use Credits from the Mitigation Bank exceed the total area of wetlands created by this Mitigation Bank.

C. If the Mitigation Bank is constructed in Phases, the accounting of Credits shall duly reflect this phasing of work.

STREAM MITIGATION CREDIT COMPOSITION **				
	Original MBI	**Bank Expansion**	**Original MBI**	**Bank Expansion**
Proposed mitigation activity	**Linear Feet/Acres**		**Proposed Credit**	
Stream Restoration (LF)	5,576 LF	92 LF	5,576	92
Stream Enhancement with Instream Structures (LF)	989 LF	0 LF	297	0
Stream Enhancement (LF)	4,328 LF	0 LF	1,078	0
Riparian Areas – Preservation (LF or Ac)	4,393 LF / 1.7 Ac	22,894 LF/ 220.8 Ac	42	4,758
Riparian Areas – Planting/Re-Establishment (Ac)	153.9 Ac	0	8,546	0
Adjustment Factors (LF)			5,327	1,917
Other - add intermediate values here			N/A	N/A
5% Conservation Easement			N/A	N/A
Total for Entire Bank	**38,272 LF / 376.4 Ac**		**27,633**	
Percent of credits involving preservation only				24%

** Linear feet and credits are subject to change based on the results of the as-built report, boundary surveys, delineations, and monitoring reports

Exhibit Q
Long-Term Management Plan

Long-term Management Plan
For
The Roanoke River Wetlands and Stream Mitigation Bank

Long-Term Management Plan

I Introduction

A Purpose of Establishment

The Roanoke River Wetlands and Stream Mitigation Bank ("Bank") was established by the Mitigation Bank Instrument ("MBI") to compensate for unavoidable impacts to, and to conserve and to protect aquatic resources and associated buffers. The Bank (Site) property includes 9.88 acres of aquatic resources including 3.7 (original) + 1.58 (Bank Expansion) acres of non-tidal wetlands and 0.64 (original) + 0 (Bank Expansion) acres of open waters, 5,576 (original) + 92 (Bank Expansion) linear feet of restored stream channel, 5,317 (original) + 0 (Bank Expansion) linear feet of enhanced stream channel, 1.7 (original) + 220.8 (Bank Expansion) acres of preserved riparian buffer and 153.9 (original) +0 (Bank Expansion) acres of restored or enhanced riparian buffer. The IRT Agencies include the Norfolk District of the U.S. Army Corps of Engineers, Region 3 of the U.S. Environmental Protection Agency, the Virginia Field Office of the U.S. Fish and Wildlife Service, the Virginia Department of Environmental Quality, the Virginia Department of Game and Inland Fisheries, the Virginia Department of Conservation and Recreation, and the Virginia Department of Forestry. Terms used in this management plan have the same meaning as defined in the MBI.

B Purpose of this Long-term Management Plan

The purpose of this long-term management plan is to ensure the Bank or Bank Site is managed, monitored, and maintained in perpetuity. This management plan establishes objectives, priorities and tasks to monitor, manage, maintain and report on the aquatic resources, associated buffers, covered species and covered habitat on the Bank. This management plan is a binding and enforceable instrument, implemented in accordance with the MBI and the real estate protection instrument (conservation easement or declaration of restrictions) covering the Bank property.

C Long Term Steward and Responsibilities

The Long-Term Steward is Roanoke River Wetlands and Stream Mitigation Bank, LLC. The Long-Term Steward, and subsequent Long-Term Stewards upon transfer, shall implement this long-term management plan, managing and monitoring the bank property in perpetuity to preserve its habitat and conservation values in accordance with the Bank's MBI, conservation easement and/or declaration of restrictions, and the long-term management plan. Long-term management tasks shall be funded through the Long-Term Management Fund. The Long-Term Steward must maintain a copy of the MBI and all addendums associated with the Bank (Site) including all deed restrictions and easements. The Long-Term Steward shall be responsible for providing an annual report to the IRT detailing the time period covered, an itemized account of the management tasks and total amount expended. Any subsequent grading, or alteration of the site's hydrology and/or topography

by the Long-Term Steward or its representatives must be approved by the IRT and the necessary permits, such as a Section 404 permit and/or Virginia Water Protection Permit, must be obtained if required.

D Eminent Domain

(a) If any Property is condemned or taken pursuant to governmental action or other exercise of the power of eminent domain (a "Taking"), or if the Long Term Steward or Owner of the property receives notice of a potential Taking, Long Term Steward will notify IRT in writing.

(b) Long Term Steward has the obligation to pursue an award for the value of any Lost Mitigation (as defined in subsection (c)). If Long Term Steward or Owner of the property receives an award or any type of compensation from or related to the Taking that represents the value of any Lost Mitigation, then Long Term Steward will use that award, net of the cost and expense incurred by Long Term Steward or Owner of the property to pursue the award, to replace the Lost Mitigation, in accordance with instructions and approval of the IRT.

(c) For purposes of this Section, "Lost Mitigation" means those Functions and Values (as hereafter defined) lost in the Taking for which credits have been sold by Bank Sponsor at the time of the Taking. "Functions and Values" means preservation, enhancement and restoration of streams, wetlands and other aquatic resources.

(d) It is the intention of Long Term Steward and IRT that (i) this section requires Long Term Steward to replace lost Functions and Values only when Bank Sponsor has, as of the time of the Taking, sold the credits derived from the lost Functions and Values and (ii) Long Term Steward's obligation under those circumstances is limited to the award Long Term Steward or Owner of the property receives for the value of the lost Functions and Values, net of the cost and expense incurred by Long Term Steward or Owner of the property to pursue the award.

II Property Description

A Setting and Location

The Bank *(Site)* is located at 170 Pawnee Lane, Henry County, in the Commonwealth of Virginia. The original Bank is designated as Parcel No. 075870005 in Henry County and Tax Map No. 1190006401, 1190006400, and 1190006500 in Franklin County. The Bank expansion is designated as Tax Map No. 1190002900, 1190003000, and 1190006700 in Franklin County. The Property is shown on the general vicinity map (Exhibit A in MBI) and the bank property map (Exhibit B & C in MBI). The Bank consists of 182.0 acres within the approximate 358.87 acre original property + 237.82 acres within the approximate 392.95 acre Bank expansion property. The general vicinity map shows the Bank location in relation to cities, towns, or major roads, and other distinguishable landmarks. The Bank property map shows the Bank property boundaries on a topographic map.

B History and Land Use

The land in the general area of the Bank site currently consists of open farm pasture with grassy knolls, steep slopes, and wooded areas centered on the existing stream channels along with mature hardwood forests, late-succession regenerative growth, and upland pine stands. Aerial photographs dating to 1948 show the southern and western portions of the site as open, indicating livestock grazing has been taking place on the site for over 60 years. Within the last 20 to 25 years, the northeast area of the site has been cleared of trees providing more land for grazing. The Bank Expansion Property in the eastern portion of the site has primarily remained forested with upland areas used for timber. The last timber harvest was approximately 8-10 years ago and this area is currently undergoing regenerative growth.

The context of the site is rural in character with scattered rural residential homes and large tracts of woodland. The area is currently zoned Agricultural Forestry/Rural Residential and the Comprehensive Plans for Henry and Franklin Counties do not indicate any future development or change in zoning within the immediate area.

C Cultural Resources

The review of The Virginia Department of Historic Resources (DHR) Data Sharing System (DSS) revealed three archaeological resources within a 2-mile search radius of the Bank site originally. One additional archaeological resource was identified within a 2-mile search radius of the Bank Expansion Property. The four resources are located near the Bank, outside the property limits. There are no known archaeological or architectural resources within the proposed Bank site.

At the request of the DHR, an Identification (Phase 1) archaeological survey was conducted in all areas that may be affected by construction related activities on the original Bank. The results are included in Exhibit R of the approved MBI. The area identified for stream work on the Bank Expansion Property is located in a disturbed / low probability area and therefore did not warrant a Phase1 survey.

D Hydrology and Topography

Most stream channels are first order, originating on the Property while the largest streams (S1 on the original Bank and R3 on the Bank Expansion Property) are third order streams. The few wetlands located on site are primarily driven by surface flows and are located in low lying areas of the site. Elevations on site range from approximately 1,480 feet in the uplands of the Bank Expansion Property ~~of the site~~ to approximately 1,080 feet along the main tributary as it exits the southern portion of the original Bank ~~site~~. The site is characterized by steep to moderate slopes with the majority of the streams originating on site. Upper reaches of the streams are fed primarily by surface runoff, with a few groundwater seeps occasionally present moving down-stream.

E Soils

The Bank is located within the Piedmont Physiographic Region. The soils of this region are derived from residuum weathered from mica schist, mica gneiss, metagrawacke, and high grade metamorphic parent material. The soils along the flood plain of the streams that transect the property are derived from alluvium deposited from the erosion of the soils weathered from these parent materials. According to the Natural Resources Conservation Service (NRCS) *Soil Survey for Franklin County, Virginia* and the *Soil Survey for Henry County, Virginia*, the site is situated on eight soil series: Clifford fine sandy loam, Codorus loam, Comus-Maggodee-Elsinboro complex, Colescreek-Delanco complex, Hickory Knob-Rhodhiss-Stott Knob complex, Minnieville loam, Woolvine-Fairview-Westfield complex and Woolvine-Clifford complex. None of the above soil series are classified by the NRCS as hydric.

F Existing Easements

Easements within the original Property limits include several overhead electric distribution lines, an Appalachian Power Company (APCO) transmission line, and a buried cable utility line. Additional easements on the Bank Expansion Property include the same APCO transmission line, a Lee Telephone Company easement, and a Plantation Pipe Line Company gas line. At the locations of the three culverts, VDOT maintains a drainage easement which extends approximately 25-feet upstream or downstream from the edge of the culvert. In addition, the original property has a Virginia Outdoors Foundation (VOF) easement which limits future development. This easement is being amended to include the Bank Expansion Property. Besides allowing agricultural and forestry practices, the easement also allows 1) wetland and stream bank restoration, or erosion control, pursuant to a governmental permit, 2) fencing along or within the buffer area, 3) construction and maintenance of stream crossings that do not obstruct water flow, and 4) creation and maintenance of foot or horse trails with unimproved surfaces.

The attached Bank Development Plan depicts the locations of the above easements.

Since stream credits are being obtained from several watersheds extending beyond the Bank limits but within the property due to the protections afforded by the VOF easement, a summary of the restrictions and allowances in the VOF easement that could occur within portions of these watersheds is listed below. Summary of VOF Easement Restrictions/Allowances

- This deed conforms to both Henry County and Franklin County land use policies as outlined in their respective Comprehensive Plans
- Property not to be divided into more than three parcels

Buildings:

- Three single family dwellings may be sited on the property
    - One dwelling may be up to 5,500 square feet of above grade living area

  - Other two dwellings not to individually exceed 4,500 square feet above ground enclosed living area
  - One dwelling may be sited in Building Area A (See VOF Easement, Exhibit A). Other dwellings shall be sited in Building Area B (See VOF Easement, Exhibit A).
- Three secondary dwellings, or dwelling units (barns, garage apartment) of which one exists
  - These dwellings not to individually exceed 2,000 square feet above ground enclosed living area
  - One dwelling may be sited in Building Area A. Other dwellings shall be sited in Building Area B (See VOF Easement, Exhibit A).
- Non-residential structures and outbuildings associated with above dwellings.
  - Aggregate footprint of all such buildings associated with each residential dwelling not to exceed 2,500 square feet in ground area
- Farm buildings or structures
  - Cannot exceed 4,500 square feet in ground area
  - Deed recognizes a farm building of approximately 11,000 square feet that exists on site
- Collective footprint of all buildings and structures, excluding roads, shall not exceed 1% of the total area of the property (1% = 3.57 acres)

Roads & Utilities:
- Private roads and utilities to serve permitted buildings may be constructed
- Roads with permeable surfaces for other permitted uses such as farming or forestry may be constructed and maintained
- Underground utilities to serve adjacent properties may be constructed and maintained at the sole and absolute discretion of VOF

Management of Forest:
- Future timber harvest activities shall be guided by a Forest Stewardship Management Plan approved by VOF
- Removal of invasive species does not require a Forest Stewardship Management Plan

Grading, Blasting, Mining:
- Grading or earth removal may be done in association with:
  - wetlands or stream bank restoration pursuant to a government permit
  - Erosion and sediment control pursuant to a government-required E&S plan
- Mining, dredging, and drilling for oil/gas are prohibited

Riparian Buffer:
- To protect water quality, no plowing, cultivation or earth-disturbing activity, or new buildings within 100-foot buffer strip along perennial tributary to Reed Creek
  - Exception to this if doing wetland or stream bank restoration or fencing

- Amendment may be made to this Easement if it enhances the conservation values or adds to the restricted property.

G Adjacent Land Uses

Generally, the area surrounding the Bank is rural in character. Rural residential homes and small farms are found adjacent to the Bank. Large tracts of woodland also surround the Bank, of which some are used for timber/logging.

As of May 2010, all properties bordering the eastern portion of the Bank are intact forest lands. The southeastern and northwestern portions are bounded by County Road 657 (Old Quarry Road) and State Road 608, respectively, the other side of which is a mix of forest, open fields, and a few single family residences. The property adjacent to the northern portion of the Bank was timbered in the Spring of 2009.

III Habitat and Species Descriptions

A Baseline Description of Biological Resources on Bank Site

Small forested corridors on the original site include upland vegetation such as tulip poplar (*Liriodendron tulipifera*), green ash (*Fraxinus pennsylvatica*), black walnut (*Juglans nigra*), sweet gum (*Liquidambar styraciflua*), black cherry (*Prunus serotina*), red maple (*Acer rubrum*), common persimmon (*Diospyros virginiana*), Virginia pine (*Pinus virginiana*), sycamore (*Platanus occidentalis*), and coralberry (*Symphoricarpos orbiculatus*). The forest on the Bank Expansion Property includes the same species, and also northern red oak (*Quercus rubra*), American beech (*Fagus grandifolia*), and northern spicebush (*Lindera benzoin*). Invasive species which were noted within the forested corridors include multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), Barberry (*Berberis spp.*), and Tree-of-heaven (*Ailanthus altissima*). The emergent wetlands contain primarily soft rush (*Juncus effuses*) and fescue.

The majority of the Bank contains herbaceous pasture grasses suitable for cattle. A thorough biological assessment of the stream and wetland resources has not been performed, however degradation from livestock is prominent. Erosion and sedimentation and a general lack of biological activity are evident in both streams and wetlands.

B Summary of Bank Development Plan

Development of the Bank will involve stream mitigation activities via stream and riparian area restoration, enhancement, and preservation activities as depicted in the Bank Development Plan (Exhibit D in MBI). Specific goals and objectives for each portion of the Bank shall be specifically provided in the Mitigation Site Plan for each phase of the Bank.

1. *Riparian Area Activities*
   Approximately 155.7 (original) +220.8 (Bank Expansion) acres of the Bank will be included as riparian area activities. Heavy planting of the riparian buffer is the predominant activity, comprising 145.9 acres (original). Light planting encompasses 8.1

acres (original) and riparian buffer preservation includes 1.7 (original) +220.8 (Bank Expansion) acres. Several areas throughout the site, including some of the heavy planting and light planting areas, will also include invasive removal and/or control.

2. *Stream Preservation*
The Bank will preserve approximately 4,393 (original) + 22,894 (Bank Expansion) linear feet (LF) of unnamed tributaries on site. In general, the streams proposed for preservation are both low gradient and high gradient, have stable banks and demonstrate a variety of instream habitats.

3. *Stream Enhancement (with and without structures)*
Stream enhancement activities are proposed on approximately 5,317 (original) + 0 (Bank Expansion) LF throughout the site. Stream enhancement activities can fall into two separate categories: with structures and without structures. Stream enhancement with instream structures may include constructed riffles, rock cross-vanes and/or j-hooks. The instream structures are typically used to divert erosive flows from unstable stream banks and may also be used to provide grade control in areas that are unfeasible for restoration. Stream enhancement without instream structures include biological and mechanical bank work, such as:
    - Laying back the banks;
    - Installation of bankfull benches; and
    - Streambank plantings.

4. *Stream Restoration*:
Stream restoration is proposed on approximately 5,576 (original) + 92 (Bank Expansion) LF of unnamed tributaries throughout the site. The proposed stream restoration area is located primarily in the active livestock pasture; but is also required near Route 608, where the culvert outfall has caused extensive erosion; at the pond, where the existing dam will be removed and the channel will be reconstructed through this area; and a culvert removal on the Bank Expansion Property.

    Priority 1, 2, and 3 stream restoration practices are proposed on the Site. The primary objective of Priority 1 stream restoration is to re-establish dimension, pattern, and profile on the previous floodplain using relic channel or construction of new bankfull discharge channel. The primary objective of Priority 2 stream restoration is to construct a channel in the bed of the existing channel, and convert the existing bed to new floodplain. The primary objective of Priority 3 restoration is to create a stable channel that contains a flood prone area, but may be too confined to create an active floodplain. Stream restoration shall be accomplished by a combination of practices, including, but not limited to:
    - Restoration of a natural meander pattern;
    - Installation of instream structures to further stabilize the stream channel and provide grade control;
    - Installation of habitat structures, such as root wads;
    - Herbicide treatments of non-native species, if required;
    - Replanting of indigenous vegetation; and

- Fencing along adjacent agricultural uses.

C Endangered and Threatened Species

A search of the Virginia Department of Game and Inland Fisheries (VDGIF) online database was conducted on June 8, 2009 (original) and March 6, 2013 (Bank expansion) using a 2-mile radius around the proposed Bank. The search revealed no known threatened or endangered species within the search area. No threatened and endangered waters, cold water streams, anadromous fish reaches or other items of significance were identified on the proposed Bank.

The FWIS database search also lists Wildlife Action Plan (WAP) Tier I, II, and III species predicted habitat that is located within the two-mile radius search. Spotted-margin Madtom (*Noturus insignis*), Roanoke bass (*Ambloplites cavifrons*), and Roanoke logperch (*Percina rex*) were listed for their known association with Reed Creek. Spotted-margin Madtom and Roanoke bass are Tier II species, species with a very high conservation need. Roanoke logperch is a Tier I species, characterized by critical conservation need, and also a federal and state endangered species. Predicted habitat for all these species is located ¼-mile to 1-mile from the Site. Specifically, the Roanoke logperch is found throughout the Smith River. Most of the larger tributaries to the Smith River, including the lower reaches of Reed Creek, are considered potential habitat for this species.

However, the Roanoke logperch (*Percina rex*), a federally endangered species, is found throughout the Smith River. It is known above and below Philpott Dam. Below Philpott Dam it is found from Town Point Creek down to the Virginia / North Carolina border. Most of the larger tributaries to the Smith River are considered potential habitat for this species, including the lower reaches of Reed Creek.

The U.S. FWIS IPaC system generated a list of federally endangered species that may be affected by the proposed project. The species listed include the James spinymussel (*Pleurobema collina*), Mitchell's Satyr Butterfly (*Neonympha mitchellii mitchellii*), Roanoke logperch (*Percina rex*), and Smooth coneflower (*Echinacea laevigata*). As part of the IPaC review, a search of the Center for Conservation Biology (CCB) Bald Eagle Nest Locator was also conducted. No identified nests or associated management zones were located within the Site, according to the CCB Bald Eagle Nest Locator.

D Rare Species and Species of Special Concern

There are no known rare species or species of special concern that occur on the Bank site.

IV Management and Monitoring

The overall goal of long-term management is to foster the long term viability of the Bank site's aquatic resources, associated buffers, and any listed species/habitat. Routine monitoring and minor maintenance tasks are intended to assure the viability of the Bank site in perpetuity.

A Biological Resources

The approach to the long-term management of the Bank site's biological resources is to conduct annual site examinations and monitoring of selected characteristics to determine stability and ongoing trends of the preserved, restored, enhanced, and created aquatic resources and associated buffers, including wetlands and streams. Annual monitoring will assess the Bank's condition, degree of erosion, establishment of invasive or non-native species, water quality, fire hazard, and/or other aspects that may warrant management actions. While it is not anticipated that major management actions will be needed, an objective of this long-term management plan is to conduct monitoring to identify any issues that arise, and using adaptive management to determine what actions might be appropriate. Those chosen to accomplish monitoring responsibilities will have the knowledge, training, and experience to accomplish monitoring responsibilities.

Adaptive management means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the IRT in discussion with the Long-Term Steward. Adaptive management includes those activities necessary to address the affects of climate change, fire, flood, or other natural events. Before considering any adaptive management changes to the long-term management plan, the IRT will consider whether such actions will help ensure the continued viability of Bank's biological resources.

The Long-Term Steward for the Bank site shall implement the following:

Element A.1 Aquatic Resources, including Wetlands, and Associated Buffers

Objective: Monitor, conserve and maintain the Bank site's aquatic resources and associated buffers. Limit any impacts to aquatic resources and associated buffers from vehicular travel or other adverse impacts.

Task: At least one annual walk-through survey will be conducted to qualitatively monitor the general condition of these habitats. General topographic conditions, hydrology, general vegetation cover and composition, invasive species, erosion, will be noted, evaluated and mapped during a site examination. Notes to be made will include observations of species encountered, water quality, general extent of wetlands and streams, and any occurrences of erosion, structure failure, or invasive or non native species establishment and/or expansion.

Task: Establish reference sites for photographs and prepare a site map showing the reference sites for the Bank file. Alternatively, utilize photographic reference sites, if any, developed during interim bank management period. Reference photographs will be taken of the overall Bank site at least every five years from the beginning of the long-term management,

with selected reference photos taken on the ground more frequently, one time per year.

Special attention should be paid to any area adjacent to or draining from non-bank lands. Streams and wetlands should be observed near bank boundaries to observe if increased sediment deposition has occurred. The report should provide a discussion of any recent changes in the watershed (i.e., subdivision being developed upstream of stream bank).

Element A.2 Threatened/Endangered Plant Species Monitoring *(if applicable)*

This section is not applicable to this project.

Element A.3 Threatened/Endangered Animal Species Monitoring *(if applicable)*

This section is not applicable to this project.

Element A.4 Invasive Species

Invasive species threaten the diversity or abundance of native species through competition for resources, predation, parasitism, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to the invaded habitat.

Objective: Monitor and maintain control over invasive species that diminish site quality for which the bank was established. The Long-Term Steward shall consult the *Virginia Department of Conservation and Recreation's Invasive Alien Plant list at* http://www.dcr.virginia.gov/natural_heritage/documents/invlist.pdf for guidance on what species may threaten the site and on management of those species.

Task: Mapping of invasive species cover or presence shall occur during the first five years of bank management, to establish a baseline. Mapping shall be accomplished through use of available technologies, such as GIS and aerial photography.

Task: Each year's annual walk-through survey (or a supplemental survey) will include a qualitative assessment (e.g. visual estimate of cover) of invasive species. Additional actions to control invasive species will be evaluated and prioritized in coordination with the IRT.

Task: Twice per year, herbicide application and/or bush hogging may be completed in the areas outside the riparian buffer but within the Bank limits.

Attached to this plan are fact sheets (including identification aid) for all highly invasive/non-native species known to be present on the site, including

multiflora rose (Rosa multiflora), Japanese honeysuckle (Lonicera japonica), and Tree-of-heaven (Ailanthus altissima) (see Appendix A MBI).

Element A.5 Vegetation Management

Objective: Analyze effects of any authorized silvicultural manipulations or vegetative maintenance on the wetland, streams, and buffers on the bank site. If determined appropriate, develop and implement specific silvicultural manipulations (e.g. selective thinning) or vegetative maintenance in coordination with the IRT.

Objective: Adaptively manage vegetation based on site conditions and data acquired through monitoring to maintain biological values. Analyze effects of any activities adjacent to the Bank on the vegetation management or composition within the Bank.

Task: Review and explore potential vegetation management regimes as proposals and/or opportunities and funding arise. If determined to potentially maintain site quality, develop specific silvicultural/vegetation practices, amend this long-term management plan with the IRT's approval to reflect those practices, and implement silvicultural/vegetation actions as funding allows.

Task: Implement vegetation management techniques, if determined beneficial and as funding allows, allowing and encouraging development of vegetation as identified in the MBI. Implementation of vegetation management techniques must be approved by the IRT.

B Security, Safety, and Public Access

The Bank will be fenced or appropriately marked and may be accessed by the public only with the permission of the landowner or long term steward. Research and/or other educational programs or efforts, hunting, fishing, and passive recreational activities are allowed on the Bank site, but are not specifically funded or a part of this long-term management plan.

If mosquito abatement issues arise, they will be addressed through the development of a plan by the Long-Term Steward and any local mosquito control district or local health department in coordination with and approved by the IRT.

Potential wildfire fuels will be reduced as needed where approved by the IRT.

Element B.1 – Trash and trespass

Objective: Monitor sources of trash and trespass.

Objective: Collect and remove trash, repair vandalized structures, and rectify trespass impacts.

Task: During each site visit, record occurrences of trash and/or trespass. Record type, location, and management ~~mitigation~~ recommendations to avoid, minimize, or rectify a trash and/or trespass impact.

Task: At least once yearly collect and remove as much trash as possible and repair and rectify vandalism and trespass impacts.

Element B.2 – Fire Hazard Reduction

Objective: Maintain the site as required for fire control while limiting impacts to biological values.

Task: Reduce vegetation in any areas recommended by authorities, and as approved by the IRT, for fire control.

C Infrastructure and Facilities

Element C.1 Fences, Gates, Signage, Crossings, and Property Boundaries

Objective: Monitor condition of fences, gates, signage, crossings, and property boundaries.

Objective: Maintain fences, gates, signage, crossings and property boundaries to prevent casual trespass, allow necessary access, and [*if applicable:* facilitate management.]

Task: During each site visit, record condition of fences, gates, signs, crossings, and property boundaries. Record location, type, and recommendations to implement repair or replacement to fence, gate, signage, crossings or property boundary markers, if applicable.

Task: Maintain fences, gates, signs, crossings and property boundary markers as necessary by replacing posts, wire, gates, and signs. Replace fences and/or gates, as necessary, and as funding allows. Note any trespass by livestock.

Element C.2 Berms, Structures, and Roads

Objective: Monitor condition of berms, structures, and roads.

Objective: Maintain berms, structures, and roads to facilitate management and maintain conditions of wetlands and streams

Task: During each site visit, record condition of berms, structures, and roads. Record location, type, and recommendations to implement repair or replacement to berms, structures, and roads, if applicable.

Task: Maintain berms, structures, and roads as necessary. Replace berms, structures, and roads as necessary, and as funding allows.

D Reporting and Administration

Element D.1 – Annual Report

Objective: Provide annual report on all management tasks conducted and general site conditions to IRT and any other appropriate parties. Each report shall include a cover page with the following information: the bank name, (umbrella bank name if applicable), site name (if applicable), bank phase (if applicable), Long-Term Steward (name, address, phone number, and email address), monitoring year, and any requested action (e.g. funding release, maintenance recommendations requiring IRT approval).

Task: Prepare annual report and any other additional documentation. Include a summary. Complete and circulate to the IRT and other parties by December 31 of each year. Reports should be distributed electronically.

Task: Make recommendations with regard to (1) any enhancement measures deemed to be warranted, (2) any problems that need near-,short-, and long-term attention (e.g., weed removal, fence repair, erosion control), and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date. Provide documentation of the cost of any recommended maintenance and repairs.

V Transfer, Replacement, Amendments, and Notices

A Transfer

Any subsequent transfer of responsibilities under this long-term management plan to a different Long-Term Steward shall be requested by the Long-Term Steward in writing to the IRT, shall require written approval by the IRT, and shall be incorporated into this long-term management plan by amendment.

The long-term steward shall be required to ensure that any subsequent property owners (if not identified as the long-term steward) are notified of the deed restriction, conservation easement, purpose and location of the bank lands, and requirement for long-term stewardship.

B Replacement

If the Long-Term Steward fails to implement the tasks described in this long-term management plan and is notified of such failure in writing by any of the IRT, the Long-Term Steward shall have 90 days to cure such failure. If failure is not cured within ninety (90)

days, the Long-Term Steward may request a meeting with the IRT to resolve the failure. Such meeting shall occur within thirty (30) days or a longer period if approved by the IRT. Based on the outcome of the meeting, or if no meeting is requested, the IRT may designate a replacement Long-Term Steward in writing by amendment of this long-term management plan. If the Long-Term Steward fails to designate a replacement Long-Term Steward, then such public or private land or resource management organization acceptable to and as directed by the IRT may enter onto the Bank property in order to fulfill the purposes of this long-term management plan.

C Amendments

The Long-Term Steward, property owner, and the IRT may meet and confer from time to time, upon the request of any one of them, to revise the long-term management plan to better meet management objectives and preserve the conservation values of the Bank property. Any proposed changes to the long-term management plan shall be discussed with the IRT and the Long-Term Steward. Any proposed changes will be designed with input from all parties. Amendments to the long-term management plan shall be approved by the IRT in writing shall be required management components and shall be implemented by the Long-Term Steward.

If the VDGIF or USFWS determine, in writing, that continued implementation of the long-term management plan would jeopardize the continued existence of a state or federally listed species, any written amendment to this long-term management plan, determined by either the VDGIF or USFWS as necessary, shall be a required management component and shall be implemented by the Long-Term Steward.

D Notices

Any notices regarding this long-term management plan shall be directed as follows:

Long-Term Steward (name, address, telephone and FAX)

Roanoke River Wetlands and Stream Mitigation Bank, LLC
5209 Center Street
Williamsburg, VA 23188

Property Owner (name, address, telephone and FAX)

Danny Thompson
8591 Floyd Hwy
Copper Hill, VA 24079

IRT Chair:

Vinny Pero
U.S. Army Corps of Engineers

Norfolk District – Charlottesville Field Office
920 Gardens Blvd.
Suite 103-B
Charlottesville, VA 22901
(434) 973-0568

IRT Co-Chair:

Sarah Woodford
Virginia Department of Environmental Quality
629 East Main Street, 9th Floor
P.O. Box 10009
Richmond, VA 23240
(804) 698-4069

IRT Members:

Jennifer Stanhope
U.S. Fish and Wildlife Service
6669 Short Lane
Gloucester, Virginia 23061
(804) 824-2408

Stephanie Kubico
U.S. Environmental Protection Agency, Region 3
3EA30, 1650 Arch Street
Philadelphia, Pennsylvania 19103-2029
(215) 814-2762

Amy Ewing
Virginia Department of Game and Inland Fisheries
4010 West Broad Street
Richmond, Virginia 23230
(804) 367-2733

Edward Zimmer
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville, Virginia 22903
(434) 977-5193

VI Funding and Task Prioritization

A Funding

The Property Analysis Record (PAR) report (Appendix B) summarizes the anticipated costs of long- term management for the Bank. These costs include estimates of time and funding needed to conduct the basic monitoring site visits and reporting, trash removal, fence repair,

etc. and a prorated calculation of funding needed to fully repair and/or replace fences and other structures every 10-50 years. The total annual funding anticipated is approximately $4,731 ($3,448 original + $1,283 Bank Expansion), therefore, with the current annual estimated capitalization rate of 4.5% the total endowment amount (The Long-Term Management Fund) required will be $105,124 ($76,622 original + $28,502 Bank Expansion).

Kaufman & Canoles, P.C. shall hold the endowment principal and interest monies (The Long-Term Management Fund) as required in the MBI, which consists of monies that are paid into it in trust, and is appropriated to fulfill the purposes for which payments into it are made. These interest monies will fund the long-term management, enhancement, and monitoring activities on Bank lands in a manner consistent with this long-term management plan.

B Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. The Long-Term Steward and the IRT shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1) required by a local, state, or federal agency; 2) tasks necessary to maintain or remediate the Bank Site (including unauthorized impacts); and 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the IRT and as authorized by the IRT in writing.

C Enforcement

The IRT and its authorized agents shall have the right to inspect the Property and take actions necessary to verify compliance with this Long-Term Management Plan. The Long-Term Management Plan herein shall be enforceable by any proceeding at law or in equity or administrative proceeding by the IRT, including the Corps or DEQ. Failure by any agency (or owner) to enforce the Long-Term Management Plan contained herein shall in no event be deemed a waiver of the right to do so thereafter.

IN WITNESS WHEREOF the Sponsor and the various IRT agencies have executed this Long Term Management Plan on the date herein below last written.

Long-Term Steward

8-19-17
Date

IN WITNESS WHEREOF, the parties hereto have executed this Long Term Management Plan on the date herein below last written.

INTERAGENCY REVIEW TEAM

By the IRT Chair:

U.S Army Corps of Engineers, Norfolk District — Date 8/3/2017

By: William T Wellar

Its: Chief, Regulatory Branch

IN WITNESS WHEREOF, the parties hereto have executed this Long Term Management Plan on the date herein below last written.

INTERAGENCY REVIEW TEAM

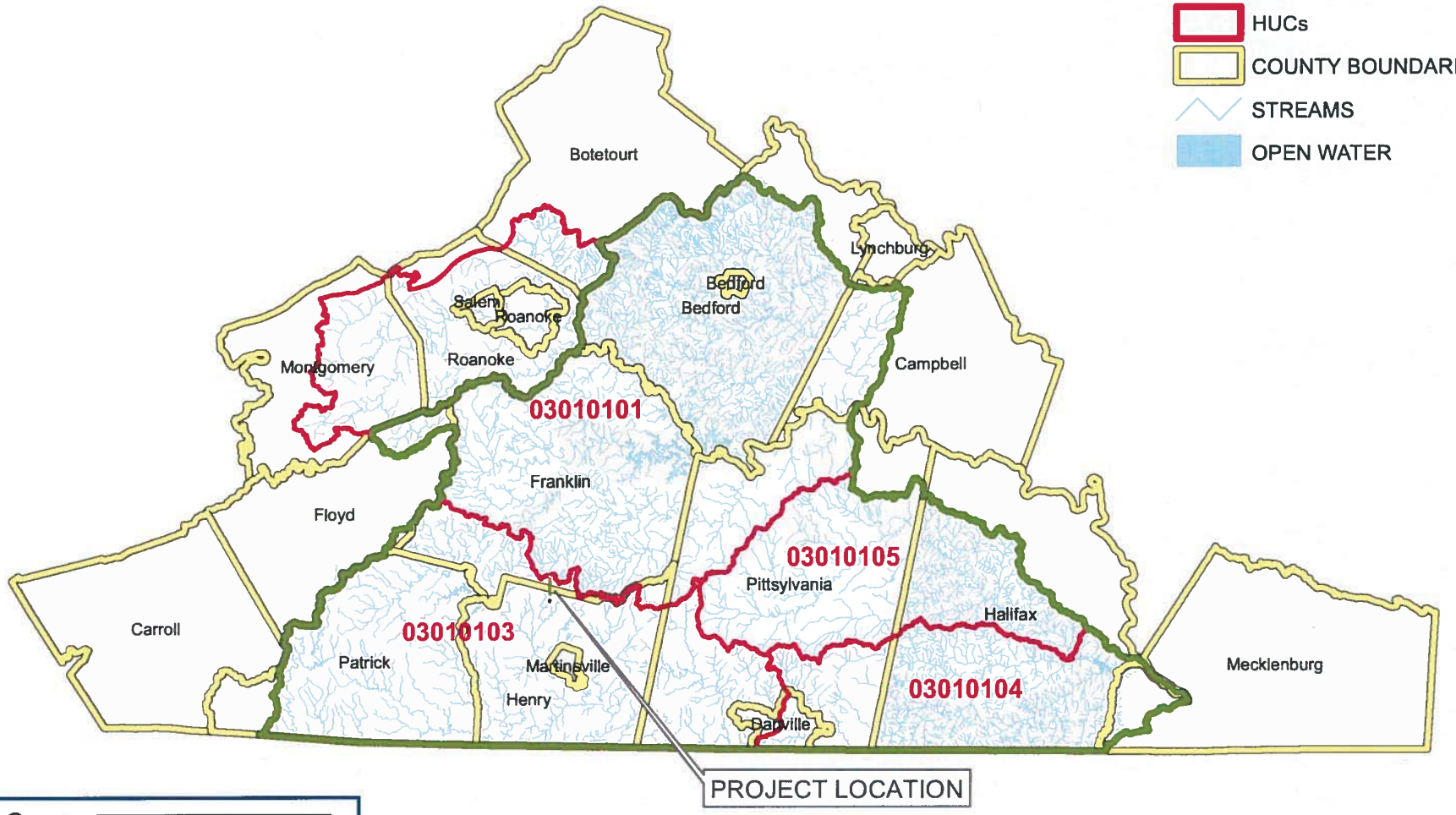
By the IRT Chair:

Virginia Department of Environmental Quality Date 08/16/2017

By: DAVID L. DAVIS

Its: Dir., Ofc. of WETLANDS & STREAM PROTECTION

Appendix A
Invasive Species Fact Sheets
(see approved MBI dated May 2011)



WILLIAMSBURG ENVIRONMENTAL GROUP, INC.

EXHIBIT K

SERVICE AREA MAP

ROANOKE RIVER WETLANDS AND STREAM MITIGATION BANK

FRANKLIN AND HENRY COUNTIES, VA | JANUARY 2014

SOURCE: VDOT COUNTY MAP SERIES, 2001
WBD HUC 2013, USGS

SCALE: 1 INCH = 18 MILES

18 9 0 18 Miles

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R1	894	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length			May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks		Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1		0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00; Lt Bank > 0.00; Credit = SUM of banks: 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 89,400 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	79715				0			
	% Area	89%	0%	0%	0%	0%	0%	89%	
	Credit>	0.14	0.07	0.29	0.38	0.4			
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	77363							
	% Area	87%	0%	0%	0%	0%	0%	87%	
	Credit>	0.14	0.07	0.29	0.38	0.4			

CREDITS: Rt Bank > 0.12; Lt Bank > 0.12; Credit = 0.12 — Project Credits: 107

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	118048							
	% Area	132%	0%	0%	0%	0%	0%	132%	
	Credit>	0.07	0.07	0.15	0.19	0.2			
		Pres		Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	68425							
	% Area	77%	0%	0%	0%	0%	0%	77%	
	Credit >	0.07	0.07	0.15	0.19	0.2			

CREDITS: Rt Bank > 0.09; Lt Bank > 0.05; Credit = 0.07 — Project Credits: 63

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			894
Credit>			0.25

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 224 — Project Credits

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 394

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R2	427	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work (Credit Per Length; Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 42,700 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	32985				0		
	% Area	77%	0%	0%	0%	0%	0%	77%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	44387						
	% Area	104%	0%	0%	0%	0%	0%	104%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.11 Credit; Lt Bank > 0.15 0.13 — Project Credits: 56

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	82290						
	% Area	193%	0%	0%	0%	0%	0%	193%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	115066						
	% Area	269%	0%	0%	0%	0%	0%	269%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.13 Credit; Lt Bank > 0.19 0.16 — Project Credits: 68

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			427
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 128 — Project Credits: 128

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 252

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/13/13; revised 4/30/14	R3	9068	

Name(s) of Evaluator(s)	Steam Name and Information	Project Credits
SW,GH	Tributary to Reed Creek	

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration: 0 — Credit per foot: 1 — Credits = Stream Length X 1.0 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Structures: 0 Length: 30

Length Affected by Instream Structures: 0 — Credit per foot: 0.3 — Credits = Stream Length X 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work			Biological Bank Work		
	Credit Per Length	Pick One Per Length			May Be Cumulative Per Length		
Activities		Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings	
Credit per foot per bank		0.1	0.15	0.1	0.1	0.09	
Right Bank	Length		0		0	0	
	Credit>		0.15		0.09		
Left Bank	Length		0		0	0	
	Credit >		0.15		0.09		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks: 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 906,800 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	527638	9174			0		
	% Area	58%	1%	0%	0%	0%	0%	59%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	726704	11504					
	% Area	80%	1%	0%	0%	0%	0%	81%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.08 Credit; Lt Bank > 0.11 0.10 — Project Credits: 907

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	932183						
	% Area	103%	0%	0%	0%	0%	0%	103%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	1233830						
	% Area	136%	0%	0%	0%	0%	0%	136%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.07 Credit; Lt Bank > 0.10 0.09 — Project Credits: 816

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 1723

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R3a	249	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = 0 | Credit per foot = 1 | Project Credits = 0

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length): Structures: 0 Length: 30

Length Affected by Instream Structures = 0 | Credit per foot = 0.3 | Project Credits = 0

Credits = Stream Length X 0.3

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work (Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)		
Activities	Credit Per Length	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings	
Credit per foot per bank		0.1	0.15	0.1	0.1	0.09	
Right Bank	Length		0			0	0
	Credit>		0.15			0.09	
Left Bank	Length		0			0	0
	Credit >		0.15			0.09	

CREDITS: Rt Bank > 0.00 | Lt Bank > 0.00 | Credit = SUM of banks | Project Credits = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 24,900 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	21461	0			0		
	% Area	86%	0%	0%	0%	0%	0%	86%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	19481						
	% Area	78%	0%	0%	0%	0%	0%	78%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.12 | Lt Bank > 0.11 | Credit = 0.12 | Project Credits = 30

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	74744						
	% Area	300%	0%	0%	0%	0%	0%	300%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	10203						
	% Area	41%	0%	0%	0%	0%	0%	41%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.21 | Lt Bank > 0.03 | Credit = 0.12 | Project Credits = 30

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			249
Credit>			0.3

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 75

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 135

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R5	928	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work (Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)	
	Credit Per Length					
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks		Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1		0.1	0.09
Right Bank Length						0
Right Bank Credit>						
Left Bank Length						0
Left Bank Credit >						

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 92,800 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	96493				0		
	% Area	104%	0%	0%	0%	0%	0%	104%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	93791						
	% Area	101%	0%	0%	0%	0%	0%	101%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.15 Credit; Lt Bank > 0.14 0.15 = 139

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	165364						
	% Area	178%	0%	0%	0%	0%	0%	178%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	144979						
	% Area	156%	0%	0%	0%	0%	0%	156%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.12 Credit; Lt Bank > 0.11 0.12 = 111

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 250

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R5a	25	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length			May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks		Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1		0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks → Project Credits: 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 2,500 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0				0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 → Project Credits: 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 → Project Credits: 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 0

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R6	156	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mechanical Bank Work (Pick One Per Length) / Biological Bank Work (May Be Cumulative Per Length)

Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 15,600 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	20591				0			
	% Area	132%	0%	0%	0%	0%	0%	132%	
	Credit>	0.14	0.07	0.29	0.38	0.4			
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	24335							
	% Area	156%	0%	0%	0%	0%	0%	156%	
	Credit>	0.14	0.07	0.29	0.38	0.4			

CREDITS: Rt Bank > 0.18 Credit; Lt Bank > 0.22 0.20 — Project Credits: 31

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	17072							
	% Area	109%	0%	0%	0%	0%	0%	109%	
	Credit>	0.07	0.07	0.15	0.19	0.2			
		Pres		Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	30587							
	% Area	196%	0%	0%	0%	0%	0%	196%	
	Credit >	0.07	0.07	0.15	0.19	0.2			

CREDITS: Rt Bank > 0.08 Credit; Lt Bank > 0.14 0.11 — Project Credits: 17

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			156
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 47

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 95

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R7	1054	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work (Credit Per Length; Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09
Right Bank Length					0
Right Bank Credit>					
Left Bank Length				0	
Left Bank Credit >					

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 105,400 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	102499				0		
	% Area	97%	0%	0%	0%	0%	0%	97%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	93331						
	% Area	89%	0%	0%	0%	0%	0%	89%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.14 Credit; Lt Bank > 0.12 0.13 — Project Credits: 137

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	178677						
	% Area	170%	0%	0%	0%	0%	0%	170%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	126973						
	% Area	120%	0%	0%	0%	0%	0%	120%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.12 Credit; Lt Bank > 0.08 0.10 — Project Credits: 105

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			1054
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 316 — Project Credits: 316

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 558

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R7a	40	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = 1 — Credit per foot = 1 — Credits = Stream Length X 1.0 — **0**

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = 0.3 — Credit per foot = 0.3 — Credits = Stream Length X 0.3 — **0**

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = **0**

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 4,000 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0				0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = **0**

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = **0**

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			40
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > **12**

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project — **12**

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R8	468	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = ____ Credit per foot = 1 → Project Credits = 0

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = ____ Credit per foot = 0.3 → Project Credits = 0

Credits = Stream Length X 0.3

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work (Credit Per Length; Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)		
Activities		Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings	
Credit per foot per bank		0.1	0.15	0.1	0.1	0.09	
Right Bank	Length						0
	Credit>						
Left Bank	Length						0
	Credit >						

CREDITS: Rt Bank > 0.00; Lt Bank > 0.00; Credit = SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 46,800 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	45585				0		
	% Area	97%	0%	0%	0%	0%	0%	97%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	53689						
	% Area	115%	0%	0%	0%	0%	0%	115%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.14; Lt Bank > 0.16; Credit = 0.15 → Project Credits = 70

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	55685						
	% Area	119%	0%	0%	0%	0%	0%	119%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	103205						
	% Area	221%	0%	0%	0%	0%	0%	221%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.08; Lt Bank > 0.15; Credit = 0.12 → Project Credits = 56

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			468
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 140

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 266

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R9	176	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width. — Credit per foot: 0

List Reaches that will receive full Restoration: — Total length of Full Restoration: — Credit per foot: 1 — Project Credits: 0

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles — Credit per foot: 0.3

Discuss Length Affected by Instream Structures (justify length): — Length Affected by Instream Structures: — Project Credits: 0

Credits = Stream Length X 0.3

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length						0	
	Credit>							
Left Bank	Length						0	
	Credit >							

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks → Project Credits: 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 17,600 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03 — Ensure the sums of % Riparian Blocks equal 100

Two vegetative communities maintained — Subtract 0.06

Right Bank	Area #							
	Sq. Footage	23723				0		
	% Area	135%	0%	0%	0%	0%	0%	135%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	20821						
	% Area	118%	0%	0%	0%	0%	0%	118%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.19 Credit; Lt Bank > 0.17 0.18 → Project Credits: 32

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03 — Ensure the sums of % Riparian Blocks equal 100

Two vegetative communities maintained — Subtract 0.06

Right Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	7552						
	% Area	43%	0%	0%	0%	0%	0%	43%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.03 0.02 → Project Credits: 4

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0 — *ΣLength X Credit) for all areas*

Total Compensation Credit Provided by Project: 36

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R10	2543	

Name(s) of Evaluator(s)	Steam Name and Information	Project Credits
SW,GH	Tributary to Reed Creek	

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width. — Credit per foot: 1 — Project Credits: 0

List Reaches that will receive full Restoration:

Total length of Full Restoration: [ ]

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles — Credit per foot: 0.3 — Project Credits: 0

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures: [ ]

Credits = Stream Length X 0.3

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length			May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks		Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1		0.1	0.09
Right Bank Length						0
Right Bank Credit>						
Left Bank Length						0
Left Bank Credit >						

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks → 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 254,300 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	228330				0		
	% Area	90%	0%	0%	0%	0%	0%	90%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	228690						
	% Area	90%	0%	0%	0%	0%	0%	90%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.13 Credit; Lt Bank > 0.13 0.13 → 331

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	320704						
	% Area	126%	0%	0%	0%	0%	0%	126%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	396868						
	% Area	156%	0%	0%	0%	0%	0%	156%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.09 Credit; Lt Bank > 0.11 0.10 → 254

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 585

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R10a	212	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0

Credit per foot: 1 | Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3

Credit per foot: 0.3 | Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work (Credit Per Length; Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09
Right Bank Length					0
Right Bank Credit>					
Left Bank Length				0	
Left Bank Credit >					

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 21,200 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0				0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories			
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 0

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R10b	60	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = 1 (Credits = Stream Length X 1.0) — Credit per foot = 0 — Project Credits = 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = 0.3 (Credits = Stream Length X 0.3) — Credit per foot = 0.3 — Project Credits = 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work (Credit Per Length; Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)	
Activities		Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank		0.1	0.15	0.1	0.1	0.09
Right Bank	Length					0
	Credit>					
Left Bank	Length					0
	Credit >					

CREDITS: Rt Bank > 0.00; Lt Bank > 0.00; Credit = SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 6,000 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0				0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00; Lt Bank > 0.00; Credit = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00; Lt Bank > 0.00; Credit = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			60
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 18 (ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 18

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R11	247	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

Credit per foot: 0

List Reaches that will receive full Restoration:

Total length of Full Restoration: 1

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Credit per foot: 0.3

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures:

Credits = Stream Length X 0.3 → 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks → 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 24,700 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	24815				0		
	% Area	100%	0%	0%	0%	0%	0%	100%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	21810						
	% Area	88%	0%	0%	0%	0%	0%	88%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.14 Credit; Lt Bank > 0.12 0.13 → 32

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	10054						
	% Area	41%	0%	0%	0%	0%	0%	41%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	29470						
	% Area	119%	0%	0%	0%	0%	0%	119%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.03 Credit; Lt Bank > 0.08 0.06 → 15

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 47

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R12	827	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

		Mechanical Bank Work (Credit Per Length; Pick One Per Length)			Biological Bank Work (May Be Cumulative Per Length)		
Activities		Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings	
Credit per foot per bank		0.1	0.15	0.1	0.1	0.09	
Right Bank	Length						0
	Credit>						
Left Bank	Length						0
	Credit >						

CREDITS: Rt Bank > 0.00; Lt Bank > 0.00; Credit = SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 82,700 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	75800				0			
	% Area	92%	0%	0%	0%	0%	0%	92%	
	Credit>	0.14	0.07	0.29	0.38	0.4			
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	61041							
	% Area	74%	0%	0%	0%	0%	0%	74%	
	Credit>	0.14	0.07	0.29	0.38	0.4			

CREDITS: Rt Bank > 0.13; Lt Bank > 0.10; Credit = 0.12 — Project Credits: 99

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	155268							
	% Area	188%	0%	0%	0%	0%	0%	188%	
	Credit>	0.07	0.07	0.15	0.19	0.2			
		Pres		Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	93090							
	% Area	113%	0%	0%	0%	0%	0%	113%	
	Credit >	0.07	0.07	0.15	0.19	0.2			

CREDITS: Rt Bank > 0.13; Lt Bank > 0.08; Credit = 0.11 — Project Credits: 91

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			827
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > (ΣLength X Credit) for all areas — Project Credits: 248

Total Compensation Credit Provided by Project: 438

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/13/13; revised 4/30/14	R13	581	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = Credits = Stream Length X 1.0 — Credit per foot: 1 — Project Credits: 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = Credits = Stream Length X 0.3 — Credit per foot: 0.3 — Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks → Project Credits: 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 58,100 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	48167				0			
	% Area	83%	0%	0%	0%	0%	0%	83%	
	Credit>	0.14	0.07	0.29	0.38	0.4			
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	55499							
	% Area	96%	0%	0%	0%	0%	0%	96%	
	Credit>	0.14	0.07	0.29	0.38	0.4			

CREDITS: Rt Bank > 0.12 Credit; Lt Bank > 0.13 0.13 → Project Credits: 76

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #								
	Sq. Footage	83086							
	% Area	143%	0%	0%	0%	0%	0%	143%	
	Credit>	0.07	0.07	0.15	0.19	0.2			
		Pres		Light Plant	Heavy Plant	Invasive control			
Left Bank	Area #								
	Sq. Footage	131723							
	% Area	227%	0%	0%	0%	0%	0%	227%	
	Credit >	0.07	0.07	0.15	0.19	0.2			

CREDITS: Rt Bank > 0.10 Credit; Lt Bank > 0.16 0.13 → Project Credits: 76

Σ(% Area X Credit) for all areas (banks done separately)
AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			581
Credit>			0.25

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 145
ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project 297

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/13/13; revised 3/31/14	R14	1674	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration	92	Credit per foot	1	Project Credits 92

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Structures: Length:

Length Affected by Instream Structures		Credit per foot	0.3	0

Credits = Stream Length X 0.3

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

	Mitigation Categories				
	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09
Right Bank Length					0
Right Bank Credit>					
Left Bank Length					0
Left Bank Credit >					

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 167,400 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	124003	34057			0		
	% Area	74%	20%	0%	0%	0%	0%	94%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	111563	45850					
	% Area	67%	27%	0%	0%	0%	0%	94%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.12 Credit; Lt Bank > 0.11 0.12 = 201

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	249794	8295					
	% Area	149%	5%	0%	0%	0%	0%	154%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	227969						
	% Area	136%	0%	0%	0%	0%	0%	136%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.11 Credit; Lt Bank > 0.10 0.11 = 184

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories				
Activity		Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit		0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected				1674
	Credit>			0.25

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 419

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project 896

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/13/13; revised 4/30/14	R15	2269	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

Credit per foot: 0

List Reaches that will receive full Restoration:

Total length of Full Restoration: 1

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Credit per foot: 0.3

Discuss Length Affected by Instream Structures (justify length):

Structures: Length:

Length Affected by Instream Structures: 0

Credits = Stream Length X 0.3

Project Credits: 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09
Right Bank Length					0
Right Bank Credit>					
Left Bank Length					0
Left Bank Credit >					

CREDITS

Rt Bank > 0.00 Credit

Lt Bank > 0.00 SUM of banks: 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 226,900 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	163044	28915			0		
	% Area	72%	13%	0%	0%	0%	0%	85%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	171017	39492					
	% Area	75%	17%	0%	0%	0%	0%	93%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS

Rt Bank > 0.11 Credit

Lt Bank > 0.12 0.12: 272

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	313147						
	% Area	138%	0%	0%	0%	0%	0%	138%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	322347						
	% Area	142%	0%	0%	0%	0%	0%	142%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS

Rt Bank > 0.10 Credit

Lt Bank > 0.10 0.10: 227

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 499

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R15a	73	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = 1 (Credits = Stream Length X 1.0) — Credit per foot = 0 — Project Credits = 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length): Structures: 0 Length: 15

Length Affected by Instream Structures = 0 (Credits = Stream Length X 0.3) — Credit per foot = 0.3 — Project Credits = 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories: Mechanical Bank Work (Credit Per Length; Pick One Per Length) | Biological Bank Work (May Be Cumulative Per Length)

Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length						0	0	
	Credit>		0.15				0.09		
Left Bank	Length						0	0	
	Credit >		0.15				0.09		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 7,300 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage					0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			73
Credit>			0.3

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 22

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 22

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R15b	167	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = 1 (Credits = Stream Length X 1.0) — Credit per foot = 0 — Project Credits = 0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Structures: 0 Length: 15

Length Affected by Instream Structures = 0 (Credits = Stream Length X 0.3) — Credit per foot = 0.3 — Project Credits = 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work		
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length		
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings	
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09	
Right Bank Length				0	0	
Right Bank Credit>		0.15		0.09		
Left Bank Length				0	0	
Left Bank Credit >		0.15		0.09		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 16,700 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage					0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03; Two vegetative communities maintained — Subtract 0.06; Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 = 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			167
Credit>			0.3

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 50 (ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project 50

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R15c	193	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

Credit per foot: 1 | Project Credits: 0

List Reaches that will receive full Restoration:

Total length of Full Restoration = ____

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Credit per foot: 0.3 | Project Credits: 0

Discuss Length Affected by Instream Structures (justify length):

Structures: 0 Length: 15

Length Affected by Instream Structures: 0

Credits = Stream Length X 0.3

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length					0	0	
	Credit>		0.15			0.09		
Left Bank	Length					0	0	
	Credit >		0.15			0.09		

CREDITS: Rt Bank > 0.00 | Lt Bank > 0.00 | Credit = SUM of banks: 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 19,300 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage					0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00 | Lt Bank > 0.00 | Credit = 0.00 | Project Credits: 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03

Two vegetative communities maintained — Subtract 0.06

Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage							
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 | Lt Bank > 0.00 | Credit = 0.00 | Project Credits: 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			193
Credit>			0.3

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 58

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 58

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/13/13; revised 3/31/14	R16	604	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

List Reaches that will receive full Restoration:

Total length of Full Restoration = [ ] | Credit per foot = 1 | Project Credits = 0

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures = [ ] | Credit per foot = 0.3 | Project Credits = 0

Credits = Stream Length X 0.3

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work (Credit Per Length)			Biological Bank Work (May Be Cumulative Per Length)		
	Pick One Per Length					
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings	
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09	
Right Bank Length						0
Right Bank Credit>						
Left Bank Length						0
Left Bank Credit >						

CREDITS: Rt Bank > 0.00 | Lt Bank > 0.00 | Credit = SUM of banks = 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 60,400 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	46083				0		
	% Area	76%	0%	0%	0%	0%	0%	76%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	59274						
	% Area	98%	0%	0%	0%	0%	0%	98%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.11 | Lt Bank > 0.14 | Credit = 0.13 | Project Credits = 79

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	23086						
	% Area	38%	0%	0%	0%	0%	0%	38%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	97193						
	% Area	161%	0%	0%	0%	0%	0%	161%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.03 | Lt Bank > 0.11 | Credit = 0.07 | Project Credits = 42

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories			
Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			
Credit>			

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 0

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project | 121

Compensation Crediting Form (Form 3)

Unified Stream Methodology for use in Virginia

Project #	Project Name	Locality	Cowardin Class.	HUC	Date	Reach #	Reach Length	RCI
4189	RRMB - Addendum	Franklin		03010103	1/31/13	R16a	51	

Name(s) of Evaluator(s)	Steam Name and Information
SW,GH	Tributary to Reed Creek

Project Credits

Restoration: Includes Priority 1, 2, and 3 restoration activities. Does not include buffer width.

Credit per foot: 0

List Reaches that will receive full Restoration:

Total length of Full Restoration: 1

Credits = Stream Length X 1.0

Enhancement With Instream Structures: Addressing Streambank Stability, Grade Control (Vanes, Weirs, Step-Pools), Constructed Riffles

Credit per foot: 0.3

Discuss Length Affected by Instream Structures (justify length):

Length Affected by Instream Structures:

Credits = Stream Length X 0.3 → 0

Enhancement: Addressing Streambank Stability, Entrenchment Ratios, Access to Floodplain

Mitigation Categories

	Mechanical Bank Work			Biological Bank Work	
	Credit Per Length	Pick One Per Length		May Be Cumulative Per Length	
Activities	Habitat Structures	Create Bankfull Bench	Lay Back Banks	Bio-Remediation Techniques	Stream Bank Plantings
Credit per foot per bank	0.1	0.15	0.1	0.1	0.09

Right Bank	Length							0	
	Credit>								
Left Bank	Length							0	
	Credit >								

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 SUM of banks → 0

Σ(Length X Credit) for all areas (banks done separately)

Riparian Areas: Assess the proposed 100 foot buffer on both banks based on the activity proposed. Enter the percentage of area and the credit below. (Widths of buffer above 100' will be determined below)

Activities	Buffer Re-establishment (removal of invasives)	Buffer Planting - Heavy	Buffer Planting - Light	Preservation *High Quality, Restoration, Enhancement*	Preservation *Low Quality*	Buffer area not within preservation width
Credit for 0'-100'	0.4	0.38	0.29	0.14	0.07	0
Credit for beyond 100'	0.2	0.19	0.15	0.07		0

Calculation of "Goal" riparian buffer for each side (SAR length times 100') >>>> 5,100 square feet

WITHIN FIRST 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0				0		
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		
		HQ Pres	LQ Pres	Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.14	0.07	0.29	0.38	0.4		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 → 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Outside First 100' - Mitigation Categories

One vegetative community maintained — Subtract 0.03
Two vegetative communities maintained — Subtract 0.06
Ensure the sums of % Riparian Blocks equal 100

Right Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit>	0.07	0.07	0.15	0.19	0.2		
		Pres		Light Plant	Heavy Plant	Invasive control		
Left Bank	Area #							
	Sq. Footage	0						
	% Area	0%	0%	0%	0%	0%	0%	0%
	Credit >	0.07	0.07	0.15	0.19	0.2		

CREDITS: Rt Bank > 0.00 Credit; Lt Bank > 0.00 0.00 → 0

Σ(% Area X Credit) for all areas (banks done separately)

AVE of credit for banks X length of project

Adjustment Factors: These factors are applied as a multiplier to length of a reach for which they apply

Adjustment Factor Categories

Activity	Rare, Threatened, or Endangered Species or Communities	Livestock Exclusion	Watershed Preservation
Credit	0.1 - 0.3	0.1 - 0.3	0.1 - 0.3
Stream Length Affected			51
Credit>			0.3

Record AF length /credit beneath the AF activity. Provide a narrative explanation of the applicable site conditions that warrant an adjustment and justify the AF credit chosen.

Credits > 15

Credits are cumulative and can apply to more than one reach. Each reach can have more than one Adjustment Factors

ΣLength X Credit) for all areas

Total Compensation Credit Provided by Project: 15

Compensation Summary Form (Form 4)

Unified Stream Methodology
for use in Virginia

Project #	Applicant	Date
4189	Roanoke River Wetlands & Stream MB - Amendment	3/31/2014
Evaluators	**HUC**	**Locality**
SW, GH	3010103	Franklin

Stream Name	Reach ID	Comp. Length (L_c) (feet)	Total Compensation Credit (Total CC) (From Form 3)
Tributary to Reed Creek	R1	894	394
Tributary to Reed Creek	R2	427	252
Tributary to Reed Creek	R3	9,068	1,723
Tributary to Reed Creek	R3a	249	135
Tributary to Reed Creek	R5	928	250
Tributary to Reed Creek	R5a	25	0
Tributary to Reed Creek	R6	156	95
Tributary to Reed Creek	R7	1,054	558
Tributary to Reed Creek	R7a	40	12
Tributary to Reed Creek	R8	468	266
Tributary to Reed Creek	R9	176	36
Tributary to Reed Creek	R10	2,543	585
Tributary to Reed Creek	R10a	212	0
Tributary to Reed Creek	R10b	60	18
Tributary to Reed Creek	R11	247	47
Tributary to Reed Creek	R12	827	438
Tributary to Reed Creek	R13	581	297
Tributary to Reed Creek	R14	1,674	896
Tributary to Reed Creek	R15	2,269	499
Tributary to Reed Creek	R15a	73	22
Tributary to Reed Creek	R15b	167	50
Tributary to Reed Creek	R15c	193	58
Tributary to Reed Creek	R16	604	121
Tributary to Reed Creek	R16a	51	15
	Totals	**22,986**	**6,767**

Note: Round all feet & CC's to the nearest whole number.